



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,262	11/26/2001	John W. Baker	100.362US01	1327

34206 7590 07/21/2003

FOGG AND ASSOCIATES, LLC
P.O. BOX 581339
MINNEAPOLIS, MN 55458-1339

EXAMINER

VU, PHUONG T

ART UNIT PAPER NUMBER

2841

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,262

Applicant(s)

BAKER, JOHN W.

Examiner

Phuong T. Vu

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The indicated allowability of claims 7-8, 10-15, 18, 20-21, 25-28 is withdrawn in view of the newly discovered reference(s) to Cassanova et al. (US 5,031,075).

Therefore, the previous Office Action mailed 1/17/03 is withdrawn and replaced with the present Office Action. Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 31 is objected to because of minor grammatical errors introduced with the amendments filed on 4/17/03.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 38 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The recitation, "N+1", which is critical or essential to the practice of the invention is not enabled by the disclosure.

5. Claims 16, 24, 36-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 16, use of the terms electronic modules is conflicting and misdescriptive.

Regarding claim 24, the recitation of the backplane is conflicting and misdescriptive.

Regarding claims 36-37, the claim language that one of the electronic modules designed to operate in a non-redundant configuration is designated as a redundant module still appears to be conflicting.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1-4, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Albert et al. (US 5,006,951). Regarding claim 1, the reference discloses an adaptive module 10 comprising a backplane (not shown but inherently present), a card cage 36 attachable to the housing, an active first electronic module (first of two boards 48) disposed within the card cage and electrically connected to the backplane, the active first electronic module electrically connectable to an active second electronic module (first of two boards 52) disposed within the housing for communicating with the active second electronic module, a backup first electronic module (second of two boards 48) disposed within the card cage and electrically connected to the backplane, the backup first electronic module electrically connectable to a backup second electronic module

Art Unit: 2841

(second of two boards 52) disposed within the housing for communicating with the backup second module when there is a failure within the active second electronic module and a switch/relay 58 disposed within the card cage and electrically connected to the backplane, the switch/relay adapted to enable communications between the active first electronic module and the backup second electronic module when there is a failure within the active second electronic module.

Regarding claim 2, the active first electronic module comprises a plurality of connectors 110, which mate with the backplane. The active first module is an optical transmitter/receiver and therefore would be connectable to remote equipment.

Regarding claim 3, the switch/relay comprises a plurality of circuit boards.

Regarding claim 4, the backplane is attachable to a housing.

Regarding claim 17, the active and backup first electronic modules are received in first slots within the card cage and circuit boards of the switch/relay are received in second slots of the card cage.

8. Claims 1-2, 4-6, 9, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Bagley (US 5,991,852). Regarding claim 1, the reference discloses an adaptive module 10 comprising a backplane (provided on boards 102, 109), a card cage 140 attachable to a housing, an active first electronic module (disk drive assembly in a row connected to J3 on board 109) disposed within the card cage and electrically connected to the backplane, the active first electronic module electrically connectable to an active second electronic module (adjacent to first electronic module) disposed within the housing for communicating with the active second electronic module, a backup first

Art Unit: 2841

electronic module (disk drive assembly in a row connected to J3 on board 102) disposed within the card cage and electrically connected to the backplane, the electronic module electrically connectable to a backup second electronic module disposed within the housing for communicating with the backup second module when there is a failure within the active second electronic module and a switch/relay 48, 46 disposed within the card cage and electrically connected to the backplane, the switch/relay adapted to enable communications between the active first electronic module and the backup second electronic module. Regarding the function language in the claim, it has been held that the recitation that an element is "adapted to" or "for" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Regarding claim 2, the active first electronic module comprises a plurality of connectors, which mate with the backplane. The active first module is a disk drive and is connectable to remote equipment.

Regarding claim 4, the backplane is attachable to a housing.

Regarding claim 5, the backplane is disposed in the card cage.

Regarding claim 6, the reference discloses a housing 140 for an electronic system comprising a first module (right side of chassis which is divided by the boards 102 and 109), a first backplane (provided on board 109) disposed within the first module, first and second electronic modules (two adjacent disk drive assemblies in a row connected to J3 on board 109) disposed within first module, each of the first and second electronic modules electrically connected to the first backplane, a second

Art Unit: 2841

module (left side of chassis) electrically attached to the first module, the second module comprising a second backplane (provided on board 102), a third electronic module (disk drive assembly in a row connected to J3 on board 102) disposed within the second module, the third electronic module electrically connected to the first electronic module and to the second backplane, a fourth electronic module (adjacent third electronic module) disposed within the second module, the fourth electronic module electrically connected to the second electronic module and to the second backplane and a switch/relay 48,46 disposed within the second module and connected to the second backplane, the switch/relay adapted to selectively permit communication between the third electronic module and the second electronic module when there is a failure within the first electronic module.

Regarding claim 9, the third electronic module comprises a plurality of connectors connectable to remote equipment.

Regarding claim 19, the housing may be used as a housing for a non-redundant cable modem termination system.

9. Claims 29-36, 38 is rejected under 35 U.S.C. 102(e) as being anticipated by Cloonan et al. (US 6,449,249 B1). Regarding claim 29, the reference discloses a telecommunications system inherently comprising a housing. The system is comprised of physical components that would need to be provided in a housing to enclose and protect the components. The system also comprises a backplane 425 which would be disposed within the housing and is adapted to receive a plurality of cards for 401, 402, 403, 410, 411 providing services to a plurality of subscribers and wherein the housing

Art Unit: 2841

may receive a module (one of 430, 435, 440, 445, 450) to communicatively couple to one or more of the plurality of cards in the housing to add redundancy to the telecommunications system. It is again noted that it has been held that the recitation that an element is "adapted to" or "for" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Regarding claim 30 the module may engage a rear panel of the housing. Any panel may be considered a rear panel the word "rear" is a relative directional term.

Regarding claim 31, the module (one of 435, 440, 450) includes a relay/switch, the plurality of cards includes at least one primary 402 and at least one redundant card 401, the relay/switch selectively routes signals between the at least one redundant card 401 and the inputs and outputs associated with the at least one primary card 402 when the at least one primary card fails.

Regarding claim 32, the plurality of cards includes a plurality of paired primary and secondary cards, (first primary/secondary pair 402, 401 and second primary/secondary pair 411, 410) further wherein at least one of the primary cards is used as a redundant primary card as it has the same circuitry as card 403, and a relay/switch that redirects signals between the redundant primary card and a secondary card associated with a failed primary card.

Regarding claim 33, the reference discloses a telecommunications system inherently comprising a housing. The system also comprises a backplane 425 which would be disposed in the housing and is adapted to receive a plurality of electronic

Art Unit: 2841

modules 401, 402, 403, 410, 411 each electronic module associated with inputs and outputs for providing services to a plurality of subscribers, wherein the housing is adapted to receive an adaptation module (one of 430, 435, 440, 445, 450) to selectively communicatively couple to the plurality of electronic modules in the housing and wherein the adaptation module would be inherently received in the housing and, one of the electronic modules is designated as a back-up electronic module 401 or 410 and wherein the adaptation module selectively routes signals between the back-up electronic module and the inputs and outputs associated with a primary electronic module (one of 402, 403, 411) upon failure of the primary electronic module, wherein the primary electronic module is one of the plurality of electronic modules.

Regarding claim 34, the adaptation module (one of 435, 440, 450) comprises a switch.

Regarding claim 35, the plurality of electronic modules is associated with a second plurality of electronic modules (one of 430, 435, 440, 445, 450 not including the module specified as the above noted adaptation module) to provide inputs and outputs for the plurality of electronic modules.

Regarding claim 36, the reference teaches providing redundancy in a telecommunication system, the method comprising inherently providing a housing. The housing having a plurality of electronics modules 402, 403, 411 designed to operate in a non-redundant configuration, attaching a redundancy module (comprising 410, 401 and their respective switching card), where 401 and its switching card selectively communicates with the plurality of electronic modules 402, 403 and, designating one of

the modules 410 and its respective switching card as a redundant electronic module to back-up the remaining electronic modules 411 in a redundant configuration.

Regarding claim 38, the reference discloses a telecommunications system inherently comprising a housing. The system also comprises a backplane 425 inherently disposed within the housing and adapted to receive a plurality of cards 402, 403 for providing services to a plurality of subscribers and wherein the housing is adapted to receive a self-contained module 401 to plug into the housing to add N+1 redundancy to the telecommunications equipment.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cloonan et al. (US 6,449,249B1) in view of Cassanova et al. (US 5,031,075).

Regarding claim 1, the Cloonan discloses a telecommunications system adaptive module inherently comprising a housing. The system is comprised of physical components that would need to be provided in a housing to enclose and protect the components. The system also comprises a backplane 425 which would be disposed within the housing, an active first electronic module 402 disposed within the housing and electrically connected to the backplane, the active first electronic module electrically connectable to an active second electronic module 411 disposed within the housing for

communicating with the active second electronic module, a backup first electronic module 410 disposed within the housing and electrically connected to the backplane, the backup first electronic module electrically connectable to a backup second electronic module 401 disposed within the housing for communicating with the backup second module when there is a failure within the active second electronic module and a switch/relay 445 disposed within the card cage and electrically connected to the backplane, the switch/relay adapted to enable communications between the active first electronic module and the backup second electronic module when there is a failure within the active second electronic module. Cloonan is silent about providing a housing or a housing with a card cage but, as mentioned above, a housing would be inherently required. Those skilled in the art would recognize that the most common configuration of mounting electronic modules in a housing is through use of a card cage provided in the housing for mounting the electronic components in an efficiently, orderly, and easily accessible configuration as shown in the Cassanova reference. Cassanova is relied upon solely to show a housing comprising a card cage.

Regarding claim 2, the active first electronic module necessarily comprises a plurality of connectors which mate with the backplane and may be connectable to remote equipment.

Regarding claim 3, the switch/relay comprises a plurality of circuit boards.

Regarding claim 4-5, the backplane would be attachable to a housing and disposed within the card cage.

Art Unit: 2841

12. Claims 7-16, 18-22, 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Bagley (US 5,991,852) in view of Cassanova et al (US 5,031,075). Regarding claim 7, Bagley does not provide much detail about the housing and is also silent about providing a card cage to receive and support the electronic modules. However, those skilled in the art would recognize that the most common configuration of mounting electronic modules in a housing is through use of a card cage provided in the housing for mounting the electronic components in an efficient, orderly, and easily accessible configuration as shown in the Cassanova reference. Bagley mentions that the backplanes are inserted into a central region in the housing and the electronic modules of one module on inserted into the first backplane, which module is 180 degrees from the second module comprising electronic modules which are inserted into a second backplane. They are mounted in a "back-to-back configuration". Those skilled in the art would recognize that the most common housing configuration to support such mounting is providing two back-to-back card cages for an efficient, orderly, and easily accessible configuration as shown in Cassanova. Cassanova discloses providing a housing with a centrally located backplane and two card cages which are positioned back-to-back for receiving modules as taught by Bagley. Cassanova is relied upon for this teaching. In the above-mentioned configuration, the first and second electronic modules are disposed in a card cage of the first module.

Regarding claim 8, the third and fourth electronic modules are disposed within a card cage of the second module.

Regarding claim 9, the third electronic module necessarily comprises a plurality of connectors which mate with the backplane and may be connectable to remote equipment.

Regarding claims 10-11, the second backplane is attached to the card cage and disposed within the card cage.

Regarding claim 18, the switch relay may be disposed within a card cage of the second module.

Regarding claim 19, the above-mentioned configuration first module may be provided as housing for a non-redundant cable termination system.

Regarding claim 20, the third and fourth electronic modules may be received in first slots within the second card cage and circuit boards of the switch/relay may be received in second slots of the card cage.

Regarding claim 21, the above-mentioned configuration first module may be provided as housing for a non-redundant cable termination system.

Regarding claims 12-15 please refer to the above rejection.

Regarding method claims 16, 22, 24-28, one skilled in the art would perform the steps in assembly the above-mentioned assembly.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong T. Vu whose telephone number is (703) 308-0303. The examiner can normally be reached on Mon. & Tues., 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on (703) 308-3121. The fax phone

Art Unit: 2841

numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

PTV_u
Patent Examiner
July 12, 2003

A handwritten signature in black ink, appearing to be 'PTV' followed by a stylized flourish.